I.   Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

A.   Listing of Claims

Claims 1-29 (Cancelled).

30.   (Currently Amended) An engineering system for describing a subject solid shape models existing in a three-dimensional space with use of a three-dimensional bit map having a cell comprising:

a grid that divides said three-dimensional space into a plurality of cells wherein each of said cells includes information that denotes whether its center exists inside or outside the subject solid shape,

a solid shape describing apparatus provided with a memory for storing programs;

a data storage unit;

a display unit; and

a plurality of functions provided by the programs, said functions comprising:

a function for receiving a definition of a plurality of different coordinate systems to any one of said solid models shape described by the three-dimensional bit-map;

a function for receiving a definition that an area occupied by one of said plurality of different coordinate systems overlaps with a part or whole of an area occupied by another coordinate system; and

a function for converting said solid model three-dimensional bit-map to its solid shape data with use of said defined plurality of different coordinate systems and displaying said solid model shape according to said solid shape data on the display unit.

31.   (Currently Amended) A method for describing ~~a subject~~ solid ~~models~~ shape

existing in a three-dimensional space with use of a three-dimensional bit map having a cell

comprising:

defining a grid that divides said three-dimensional space into a plurality of cells wherein

each of said cells includes information that denotes whether its center exists inside or outside the

subject solid shape;

receiving a definition of a plurality of different coordinate systems to ~~any one of~~ said

solid ~~models~~ shape described by the three-dimensional bit-map;

~~receiving a definition of a plurality of different coordinate systems to any one of said~~

~~solid models;~~

receiving a definition that an area occupied by one of said plurality of different

coordinate systems overlaps with a part or whole of an area occupied by another coordinate

system; and

converting said ~~solid model~~ three-dimensional bit-map to its solid shape data with use of

said defined plurality of different coordinate systems and displaying said solid ~~model~~ shape

according to said solid shape data on the display unit.